AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method of inducing blood vessel formation in an animal, comprising: administering to said animal an effective amount of a sphingosine kinase, or an analogue, fragment, or derivative thereof.

2-43. (Canceled)

44. (New) A method of inducing blood vessel formation in an animal, comprising administering to said animal an effective amount of a sphingosine kinase, wherein said sphingosine kinase is administered to said animal by administering to said animal a polynucleotide encoding sphingosine kinase.

45. (New) The method of Claim 44 wherein said polynucleotide encoding a sphingosine kinase is administered to said animal by administering to said animal an expression vehicle including said polynucleotide encoding a sphingosine kinase.

46. (New) The method of Claim 45 wherein said expression vehicle further includes a polynucleotide encoding a protein selected from the group consisting of VEGF, FGF, IGF, angiopoietins, PD-EGF, TGF-β, HIF1-α, nitric oxide synthase, MCP-1, Interleukin-8, ephrins, NAP-2, ENA-78, GROW-α, and active fragments of tyrosyl-tRNA synthetase.

47. (New) The method of Claim 46 wherein said expression vehicle is a viral vector.

48. (New) The method of Claim 47 wherein said viral vector is an adenoviral vector.

49. (New) The method of Claim 47 wherein said viral vector is a lentiviral vector.

50. (New) The method of Claim 47 wherein said viral vector is a BIV vector.

51. (New) The method of Claim 48 wherein said adenoviral vector is administered to said animal in an amount of from about 10^7 plaque forming units to about 10^{12} plaque forming units.

52. (New) The method of Claim 48 wherein said adenoviral vector is administered to said animal in an amount of from about $5x10^8$ plaque forming units to about $2x10^{11}$ plaque forming units.

53. (Original) The method of Claim 49 wherein said lentiviral vector is administered to said animal in an amount of from about $5x10^5$ transducing units to about 10^{12} transducing units.

54. (New) The method of Claim 49 wherein said lentivirus vector is administered to said animal in an amount of from about $5x10^5$ transducing units to about 10^{12} transducing units.

55. (New) The method of Claim 49 wherein said lentiviral vector is administered to said animal in an amount of from about $5x10^5$ transducing units to about 10^{10} transducing units.

56. (New) The method of Claim 48 wherein said adenoviral vector is administered to said animal in an amount of from about $5x10^5$ transducing units to about 10^{10} transducing units.

57. (New) A method for the prevention or treatment of congestive heart failure or myocardial ischemia, or for the treatment of ischemia-reperfusion injury or peripheral arterial diseases in an animal comprising administering to said animal an effective amount of a sphingosine kinase, wherein said sphingosine kinase is administered to said animal by administering to said animal a polynucleotide encoding sphingosine kinase.

58. (New) The method of Claim 57 wherein said polynucleotide encoding a sphingosine kinase is administered to said animal by administering to said animal an expression vehicle including said polynucleotide encoding a sphingosine kinase.

59. (New) The method of Claim 58 wherein said expression vehicle further includes a polynucleotide encoding a protein selected from the group consisting of VEGF, FGF, IGF, angiopoietins, PD-EGF, TGF-β, HIF1-α, nitric oxide synthase, MCP-1, Interleukin-8, and ephrins.

60. (New) The method of Claim 58 wherein said expression vehicle is a viral vector.

61. (New) The method of Claim 60 wherein said viral vector is an adenoviral vector

62. (New) The method of Claim 60 wherein said viral vector is a lentiviral vector.

63. (New) The method of Claim 60 wherein said viral vector is a BIV vector.

64. (New) The method of Claim 44 wherein said sphingosine kinase is selected from the group consisting of human SPHK1 and SPHK2, mouse SPHK1α, SPHK1β and SPHK2, and rat SPHK1a, SPHK1c, SPHK1d, SPHK1e and SPHK1f.

65. (New) The method of Claim 44 wherein said polynucleotide has an accession numbers selected from the group consisting of AF200328, AF245447, AF068748, AF068749, AF245448, AB049571, AB049572, AB049573, AB049574 and AB049575.

66. (New) The method of Claim 57, wherein said sphingosine kinase is selected from the group consisting of human SPHK1 and SPHK2, mouse SPHK1α, SPHK1β and SPHK2, and rat SPHK1a, SPHK1c, SPHK1d, SPHK1e and SPHK1f, comprising:

administering to said animal a polynucleotide encoding a sphingosine kinase.

67. (New) The method of Claim 57 wherein said polynucleotide has an accession numbers selected from the group consisting of AF200328, AF245447, AF068748, AF068749, AF245448, AB049571, AB049572, AB049573, AB049574 and AB049575.